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ABSTRACT

A prereferral intervention system was implemented in three schools (two elementary, one junior high) in which consultation, observation, and intervention occurred before a student entered the typical referral-for-assessment phase. A survey assessing teachers' beliefs about special services and teachers' expectations and preferences about the referral-to-placement process was completed in the fall and spring of the school year to assess the extent to which changes took place as a result of the prereferral system. Additionally, the effect on referral, testing, and place rates was monitored. Results indicating changes in attitudes concurrent with changes in referral-to-placement rates are reported and school system factors affecting a prereferral system (including internal impetus for altered practices and strong administrative support) are noted. Constraints to a prereferral intervention system included resistance to implied role changes on the part of teachers and other personnel. (Author/CL)

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EFFECTS ON REFERRAL RATES AND TEACHER ATTITUDES

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Abstract

A prereferral intervention system was implemented in three schools (2 elementary, 1 junior high) in which consultation, observation, and intervention occurred before a student entered the typical referral-for-assessment phase. A survey assessing teachers' beliefs about special services and teachers' expectations and preferences about the referral-to-placement process was completed in the fall and spring of the school year to assess the extent to which changes took place as a result of the prereferral system. Additionally, the effect on referral, testing, and placement rates was monitored. Results indicating changes in attitudes concurrent with changes in referral-to-placement rates are reported and school system factors affecting a prereferral system are discussed.

Pre-referral Interventions:

Effects on Referral Rates and Teacher Attitudes

Past research has shown that there are significant problems in current referral and placement practices. In a national survey, Algozzine, Christenson, and Ysseldyke (1982) found that an average of 92% of referred students were tested, and 73% of these tested students were placed in special education. These percentages seem exceptionally high and suggest that current referral to placement practices can be characterized generally as a one-way road to special class placement. The survey also revealed that an average of about 5% of the entire school population is referred and evaluated each year (Algozzine, Ysseldyke, & Christenson, 1983). If this rate of referral continues, and is coupled with current referral-to-placement rates, more and more students will be tested and labeled as handicapped each year. Yet, it is likely that many of these students, especially those labeled "learning disabled," may not be truly handicapped. Definitional problems abound in the area of learning disabilities (cf. Epps, Ysseldyke, & Algozzine, in press; Thurlow, Ysseldyke, & Casey, 1983; Ysseldyke, Algozzine, Shinn, & McGue, 1982), and the incidence of learning disabilities placements continues to increase. It is questionable whether federal funding will support higher numbers of students labeled as handicapped.

The entire referral-to-placement process becomes suspect when the research in this area is considered. For example, Ysseldyke, Algozzine, Richey, and Graden (1982) found that there was no relationship between the decisions made by placement teams and the extent to which the data collected supported those decisions. Also,

when students are tested, the information obtained from the assessment frequently has limited relevance to instructional decisions. Often, teachers are left dissatisfied with current evaluation practices because they do not yield practical suggestions for intervening in the classroom (Christenson, Ysseldyke, & Algozzine, 1982). Further, the tests that child study teams administer to children are often technically inadequate and cannot reliably discriminate between learning disabled and low-achieving students. Typically, when teachers refer students for special education evaluation, they have not systematically attempted any classroom interventions, and they attribute students' academic and behavior problems to internal student causes (Christenson, Ysseldyke, Wang, & Algozzine, 1983).

Overall, current referral-to-placement practices assume that when a student is experiencing difficulty in the classroom, there is some problem within the child that must be diagnosed, labeled, and "fixed" through special education. The entire special education process thus becomes a "search for pathology" (Sarason & Doris, 1979) rather than a process assessing the complex factors affecting learning problems (Adelman & Taylor, 1983) and designing appropriate interventions based on these multiple factors.

Algozzine et al. (1982) suggested that the current referral-to-placement process is inappropriate and should be changed to a referral-to-intervention process, with an emphasis on providing service to students in the least restrictive educational environment. Similarly, Maggs and White (1982) stated that a model that ties assessment to placement has become unacceptable. They suggested that

with the advent of mainstreaming the focus of assessment should be on improving the quality of instruction in the regular classroom.

Although some teachers undoubtedly are really asking to have students removed from their classrooms when they refer them, other teachers want help in planning for these students. In an assessment-to-placement model, when the student is found ineligible for special education services, the teacher is left with the "problem" (the student) but with no solutions. Even when students are placed, mainstream teachers still could benefit from assistance in modifying instruction for these students. Yet, it is this emphasis on assisting teachers through instructional intervention techniques that is often lacking in the current referral-to-placement process (cf. Ysseldyke, Algozzine, Rostollan, & Shinn, 1981). Lambert (1976) emphasized the need for the child study process to play a greater role in helping teachers become more effective in developing interventions. It is this role that is presented as an alternative model for current child study practices.

The pre-referral intervention model employed in the current study was an attempt to provide an alternative that would alleviate some of the problems associated with the current referral-to-placement model. The pre-referral intervention system is based on a consultation model of service delivery that is aimed at helping teachers intervene at the source of student problems (in the regular classroom), preventing inappropriate placements in special education, and using school resources, money, and specialists' resources more efficiently to teach and intervene rather than to diagnose and place. It is the authors'

belief that many academic and behavioral problems that children display can be solved within the context of the regular classroom and do not require special education intervention. The following study was conducted in three schools where pre-referral intervention was utilized prior to a formal referral for child study evaluation. It was expected that not only would the referral to placement rate decrease in these schools but that teachers' attitudes about the referral and placement process would change in the direction of increased tolerance of student difficulties and decreased expectations of special education placement.

Method

Subjects

The pre-referral intervention model was implemented in three schools in a large suburban school district. Two of the schools were elementary schools and the other was a junior high school (grades 7-9). School 1, an elementary school, had a total enrollment of 781 students, with 61 students in LD services (approximately 8% of the school enrollment). This school had four LD teachers, one of whom served as a part-time consulting teacher for the pre-referral project. School 2, also an elementary school, had a total school enrollment of 559 students, with 31 students in LD services (about 5.5% of the school enrollment). Two full-time and one half-time LD teachers were assigned to the building. One of these teachers worked half time as the facilitator of the child study process and as the consulting teacher for the project. School 3, the junior high school, had an enrollment of 1,308 students, with 60 students in LD services

(approximately 6% of the school population). This school had four LD teachers; one of whom spent the majority of her time as the consulting teacher for the project.

Two of the teachers serving as consulting teachers for the pre-referral intervention system were new to their schools (in Schools 1 and 3). Consulting teachers were selected by the building principals and the Director of Special Services. The participating schools were selected by the Director of Special Services and were invited to participate in the project. One additional school, a middle school, declined to participate because the LD teachers believed in a direct service model of service delivery as opposed to the indirect service model of pre-referral intervention.

Pre-Referral Intervention System

The major components of the pre-referral intervention system consisted of six stages. These are represented schematically in Figure 1. The implementation of the pre-referral intervention system was based on a model of collaboration between a school district and the Institute for Research on Learning Disabilities for applying research knowledge to implement alternative practices. The pre-referral intervention system was developed on the basis of previous IRLD research and existing resources in consultation and intervention (e.g. Bergan, 1977; Idol-Maestas, 1983).

Insert Figure 1 about here

Stage 1: Request for Consultation. To initiate the process, the classroom teacher requests consultation from the consulting teacher.

The Request for Consultation form (see Appendix A) is completed by the referring teacher.

Stage 2: Consultation. Consultation is used to produce a specific definition of the concern, as well as possible interventions. Based on a modification of Bergan's behavioral consultation model (1977), the following steps occur:

- 2.1 The referring teacher specifies in behavioral terms the reason(s) for referral; reasons are prioritized as to their importance for action.
- 2.2 The referring teacher indicates how the student's behavior affects the teacher and the teacher's expectations.
- 2.3 An intervention is designed by the referring teacher and consulting teacher using the format of Form 1 (see Appendix A). Intervention plans may include the student, parents, and other school personnel as appropriate.
- 2.4 Interventions are implemented and evaluated. The process either will end as successful (with provision for follow-up consultation) or will continue for additional suggestions.

Stage 3: Observation. Observation provides objective documentation for referral problems from Stage 2 that need further attempts at intervention.

- 3.1 Designated person (e.g., consulting teacher, school psychologist) observes in relevant school settings, noting frequency and duration of behaviors and normative comparisons with other students.
- 3.2 Observer describes: (a) curriculum, tasks, demands; (b) teacher's responses to the student; student's responses; grouping structure and seating arrangements; (c) classmate interactions; and (d) causes and consequences of student behaviors.
- 3.3 Observer meets with referring teacher for verification/feedback on observations.
- 3.4 Observer and teacher design interventions based on observations using Form 2 (see Appendix A); a meeting

may be held with the student to discuss instructional/behavioral changes. Interventions are implemented and evaluated.

- 3.5 If interventions are successful, process ends with provision for follow-up consultation. Process may continue if more intensive intervention is needed.

Intervention, which occurs within both the consultation and observation stages (Stages 2 and 3), provides data on the effect of alternative instructional strategies in matching student and the teaching environment. Interventions are documented on Form 3 (see Appendix A). Steps in intervention include:

1. Referring teacher and consultant plan several possible interventions based on data collected.
2. Each intervention plan specifies: (a) behavior(s) to be changed (what); (b) criterion for success; (c) duration of implementation; (d) location of implementation (where); (e) person(s) implementing (who); and (f) methods used (how).
3. Intervention plans are prioritized, implemented, monitored, evaluated, and modified, continued, or terminated.
4. If intervention(s) are successful, process may end with the provision for follow-up consultation. Otherwise, process continues.

Stage 4: Conference. A conference is held with the Child Review Team to share information and make a decision.

- 4.1 Meeting occurs with referring teacher, consulting teacher, parents, and relevant school personnel.
- 4.2 Previous data on consultations, observations, and effectiveness of interventions are shared.
- 4.3 Feedback from team members is solicited.
- 4.4 Decision is made to either (a) continue with intervention(s) as implemented; (b) modify interventions; or (c) refer the child for psychoeducational assessment and consideration of special services eligibility.

Stage 5: Formal referral. A formal referral is made for psychoeducational evaluation of the student. Thus, the student enters the formal child study process.

- 5.1 Evaluator(s) use data collected from Stages 1-4.
- 5.2 Assessment techniques are selected on the basis of answering specific questions: (a) What decision is being made?; and (b) What data must be collected to make the decision?

Stage 6: Formal program meeting. A formal program meeting is held to determine appropriate services.

- 6.1 Contact person assembles appropriate Child Study Team in accordance with due process regulations.
- 6.2 Data from Stages 1-5 are shared. Appropriateness of alternative placement is discussed.
- 6.3 Team develops goals for IEP.
- 6.4 Team determines whether IEP will be implemented by special services placement or by consultation in the regular classroom.
- 6.5 Child is mandated/not mandated as requiring special services. If mandated, IEP is implemented. If not mandated, child remains in present program with identified intervention.

Summary. At each stage of the pre-referral intervention process, the process ends with a specific intervention plan for the teacher. The goal of the model is to serve students in the least restrictive educational environment and to ensure that sufficient attempts have been made to provide for success in the mainstream setting before a formal referral for assessment is made. The pre-referral intervention system assumes the adoption of an ecological perspective in which the numerous factors contributing to student academic and behavior problems are considered and provided for in interventions. Therefore,

interventions are directed not only at the student but at modifying the learning environment.

Procedures

Teacher survey. In order to obtain an assessment of teacher attitudes about student learning problems and teacher beliefs and expectations about the special education process, a survey was administered in the fall of the year to assess prevailing attitudes and again in the spring to assess the extent to which changes occurred. This survey was developed by the research assistant/intern using previous IRLD survey formats for teacher beliefs and developing new questions to assess expectations and preferences about the referral-to-placement process. A copy of the survey is included as Appendix B. The survey was completed during staff meetings held in each school in the fall and spring.

Consulting teacher training. Three school days of inservice training were provided to consulting teachers participating in the project. This training, conducted by the senior author (who was in an internship position in the school district), focused on enhancing teachers' skills in consultation, observation, and intervention. Resources used in the training of consulting teachers included National School Psychology Inservice Training Modules (Gickling & Havertape, 1981; Tucker, 1981a, 1981b); models of consultation (Bergan, 1977; Idol-Maestas, 1983); intervention resources (e.g., Affleck, Lowenbraun, & Archer, 1980; Algozzine, 1982; Elliot & Piersel, 1982), as well as district-developed materials on reading interventions.

Implementation of the pre-referral system. The pre-referral intervention model was implemented by the consulting teacher in each building with technical assistance from the senior author. Weekly consultation meetings were held with the consulting teachers, and frequent contacts (weekly to biweekly) were made to the building principals to monitor and modify the process as required.

The cooperation and support of building principals was considered essential to the success of the pre-referral intervention project. In order to meet the particular needs of each building, slight modifications were made in the pre-referral process in consultation with principals, child study teams, and district personnel. In School 1, a major adjustment was made in the flow of the process to accommodate existing practices in the building and to lend support to the consulting teacher who was new to the building. The consulting teacher initially met with resistance from many teachers when an attempt was made to provide consultation prior to formal assessment; thus, a decision was made to have all new referrals continue to flow first to the child study team. Then a team decision was to be made whether to attempt pre-referral consultation and interventions or to move directly to assessment. In School 2, the consulting teacher also served as Child Study Team facilitator and continued to operate in a role similar to previous years in that she and the referring teacher met first to decide to try alternate interventions or to refer to Child Study for consideration of evaluation. In School 3, the junior high, initial referrals were made either directly to the consulting teacher or to the appropriate grade level counselor who was to refer

teachers to the consulting teacher. The consulting teacher then reported back to the Child Study Team to report on the status of pre-referral intervention cases and to solicit additional input from child study members.

Data analysis. The first component of data analysis involved the tabulation and comparison of referral, testing, and placement rates in each school for the previous school year and the present school year. Data from the previous year were collected from existing child study records. Data from the current year were collected by the consulting teacher for each building.

The second component of data analysis involved examining the extent to which teachers' responses to the survey changed from fall (pre) to spring (post). These data were analyzed using a repeated measures analysis of variance design. A .05 significance level was adopted to identify significant differences between teachers' pre and post attitudes, beliefs, expectations, and preferences. Survey data also were analyzed as a function of whether the teacher had referred students under the pre-referral intervention model.

Results

Referral, Testing, and Placement Rates

A primary research question in evaluating the effectiveness of the pre-referral intervention model is the extent to which referral-to-placement practices change as a result of implementing the model. The number of students referred, tested, and placed, and the percentage of referral to placement cases in the present year (1982-83) versus the previous school year (1981-82) are included in

Tables 1 and 2: Table 1 highlights the figures compiled at mid-year and Table 2 depicts the figures across the entire year. As can be seen in Table 1, at the semester break, there appeared to be a trend toward a significant decrease in the number of students being tested and placed in two of the three schools (Schools 1 and 3). Moreover, there was a slight (School 2) to marked (Schools 1 and 3) decrease in the percentage of referral-to-placement cases (decreasing from 75% to 42% in School 1 and from 33% to 7% in School 3). Schools 2 and 3 previously had moderate rates of referral to placement (24% and 33%, respectively), while three-fourths of referred students in School 1 previously had been placed in special services.

 Insert Tables 1 and 2 about here

Also of note in Table 1 is the apparent increase in referrals to the consulting teacher as compared to previous referrals to child study. Many of these referrals were specific referrals for consultation as opposed to the previous format of referral for evaluation. This increase in referrals was particularly notable in School 3, increasing from 49 in the previous year to 69 at mid year.

By the end of the school year, however, the numbers and rates of referral to placement in Schools 1 and 2 increased (see Table 2). In School 1, the number of students placed in special services remained constant across the two years, although the referral-to-placement rate decreased overall from 75% to 50%, due to the larger number of referrals in the current year. The rate of referral to placement

remained similar across the two years in School 2, with the number of new placements in special services increasing by three, from 11 in the year prior to implementation of the model to 14 during the pre-referral intervention project. In only one school, School 3 (the junior high) were numbers of placements and the referral-to-placement rate drastically affected at the end of the pre-referral intervention year. The number of new placements was decreased by seven, from 16 in the previous year to 9 in the present study. There also was a significant decline in referral-to-placement rates from a previously moderate level of 33% to a low percentage of 10% of referred students being placed. Also, the number of students referred for consultation in School 3 was extremely high (93) with only 21 of those students subsequently referred for child study.

At the end of the year, there was not a consistent trend in referral to placement rates. The percentage of tested students who were placed in special services remained similar across the years in School 1, increased in School 2, and decreased slightly in School 3.

Teacher Survey

Of the 134 teachers in the three schools, 105 completed the pre-test survey in the fall, for a return rate of 78.3%. The breakdown of returned surveys by school was School 1: 34 of 36 returned (94.4%); School 2: 24 of 29 returned (82.8%); and School 3: 47 of 69 returned (68.1%). In the spring of the intervention school year, 95 surveys were completed for a return rate of 70.9%. By individual school, the return rates for the spring post-test survey were School 1: 34 of 36 (94.4%); School 2: 22 of 29 (75.9%); and School 3: 39 of 69 (56.5%).

The teachers in the three schools had an average of 13.4 years of teaching experience (range = 2 to 35 years). Overall responses to survey items across schools and across both times (pre and post survey) are summarized Table 3. In general, teachers tended to agree that LD is a viable, useful classification category. However, they were less sure that LD students shared common characteristics that set them apart from other students, and that LD students can be reliably discriminated from normal students. They were more likely to agree that LD students needed instruction in a special class than they were to agree that LD students could be taught in the regular class. Teachers were more likely to attribute student problems to internal child or home causes than to educational causes. The estimated percentage of students who were LD was about 6-7%, with a range of estimates from less than 1% to about 40%. Teachers generally reported that they expected testing and diagnosis following referral more than they expected specific suggestions; they also indicated that they preferred testing and diagnosis to follow referral. Teachers tended to prefer specific suggestions more than they reported expecting to receive specific suggestions from testing.

 Insert Table 3 about here

Repeated measures analyses of variance were used to examine the extent to which teacher ratings differed over the school year, among schools, and within each school over the course of the year. Table 3 includes the mean responses for each survey item in the fall (pre-test

and the spring (post-test) across all schools and within each school. Significant differences were found for 14 of the 21 survey items when comparisons were for overall changes from pretest to posttest. Four of these differences were in the "expected" direction; that is, teachers' ratings changed in the direction of (a) increased agreement with the belief that LD students can be taught in the regular classroom (item 5), (b) increased attributions involving school causes for learning problems (item 7), and (c) increased expectations for practical testing (items 12 and 14). The remaining 10 significant differences reflected changes that were in an "unexpected" direction. For example, teachers were more likely to change in the direction of agreeing that they expected and preferred labeling and placing a student when he/she was referred and tested. Four of the 10 significant differences (items 1, 2, 4, 5, and 9) were characterized by a significant interaction between school and the pre/post condition. Teachers in Schools 1 and 3 tended to change in the direction of agreeing that LD was a viable category, that LD students could be discriminated from normal students, and that LD students could learn in regular classrooms, while teachers in School 2 gave similar ratings to these items on both the pre and post surveys. On the other hand, School 3 teachers estimated a lower percentage of LD students at the post-survey than at the pre-survey, while teacher estimates in Schools 1 and 2 were similar on pre and post surveys.

Table 4 is a summary of the mean item ratings given by teachers who referred students during the pre-referral intervention school year and teachers who did not refer students, as well as the results of

analyses. The only significant pre/post difference for the total group occurred for item 17, which dealt with teachers preferring consultation; ratings changed in the direction of teachers being less likely to agree that they preferred consultation following referral. Questions 13, 14, and 15 revealed significant differences between teachers who referred students and those who did not. Teachers who referred students during the course of the school year were generally less likely than teachers who had not referred to expect that testing would lead to a diagnostic label, to practical suggestions, or to a placement for the student.

 Insert Table 4 about here

Discussion

Results of the project to implement a pre-referral intervention system as an alternative to traditional referral-to-placement practices were mixed, with some encouraging positive results regarding reduced special education placements, reduced referral-to-placement rates, and increased referrals for consultation in one school. Yet, the remaining two schools displayed little change in referral, testing, and placement rates and numbers. Similarly, there were no clear trends in survey results assessing the extent to which teachers' beliefs, expectancies, and preferences about special services changed over the course of the school year. There also were no clear connections between changes reflected in survey results and observed changes in actual practices.

There are several factors that may account for the lack of change in practices in some schools and the positive change in the one school. As in all educational change, particularly that affecting long-standing practices, change is often slow and there often is resistance to new ideas that challenge existing practices. In the two schools that did not appear to change, there was no internal impetus for altered practices; rather, change was imposed from the outside, at the district level. In fact, school personnel within these schools generally seemed satisfied with existing procedures and practices, and with existing service delivery systems serving 8% and 5.5% of students as LD. Thus, there were several system variables that perpetuated existing practices, with only isolated and usually external forces advocating change. Existing systems in these two schools could be characterized as operating to maintain the status quo and to operate on the principle that "if it ain't broke, don't fix it." In the eyes of most school personnel in the schools that did not change, the system was not "broke."

On the other hand, the school exhibiting positive and significant changes in referral and placement practices was characterized as having strong internal support for systems change. Among the factors considered crucial in this positive change were strong administrative support for the pre-referral intervention model and for the role of the consulting teacher, administrative support for consulting teacher time spent in indirect versus direct service delivery to students, and the skill and competency of the consulting teacher.

There were several variables that served as constraints against successful implementation of a pre-referral intervention model. The

first of these was resistance by classroom teachers to a consultation-based model. While some teachers welcomed assistance through consultation, others perceived consultation as a threat to their own competency and to their perception that it is the student who has the problem. This teacher resistance is a continuing issue in the area of consultation (cf. Meyers, Parsons, & Martin, 1979) and one that can be addressed by several techniques. However, in the final analysis, consultation services cannot be delivered if the consultee (i.e., referring teacher) does not want the service.

A second area of constraints in operating a pre-referral intervention system is the resistance to implied role changes on the part of service delivery personnel (e.g., LD teachers and school psychologists). LD teachers preferring direct service exclusively over consultation and school psychologists involved primarily in testing perceived a sometimes unwanted direction of change in role. Along with this change in service delivery was the perceived concern regarding reduction in numbers of students being tested and being served in LD. For those who justify their services primarily on serving numbers, a change in service delivery format may be very threatening. However, the need for consultation services appears to exist, as reflected in increased numbers of students in School 3. In fact, the number of students receiving meaningful service may actually increase in an indirect service consultation model.

Other constraints to effective implementation of a pre-referral intervention system included the perception of limited options for instructional change in the regular education setting due to large

class sizes and restricted options for curricular modification. Another important issue was whether responsibility for pre-referral intervention is a regular education role and responsibility or can be provided by special education as a first component of the formal referral process. Finally, although most teachers report that testing typically is not helpful for instructional purposes (Thurlow & Ysseldyke, 1982; Shellenberger, 1992), the mystique of testing, labeling, and placing students in special education remains strong enough to inhibit attempts to change in a positive and useful direction.

Yet, there were several positive aspects of the attempt to implement the alternative pre-referral intervention system. Several teachers reported preference for a system designed to provide useful suggestions and assistance in intervention planning. Consulting teachers generally were viewed as helpful by teachers who referred students to them. Moreover, principals in the three participating schools all reported favorable perceptions in terms of the pre-referral system making inroads in changing teacher attitudes (albeit slowly in some schools), increasing teacher tolerance and competence to work with problem students, potentially reducing inappropriate placements in special education, and helping make the child study process more data based, with documentation on attempted interventions.

It is clear that special education is changing. Federal, state, and local funding cannot continue to support large numbers of students being labeled as handicapped. Special educators cannot continue to

rely on inadequate tests and definitions to identify LD students. And, school psychologists cannot continue their overreliance on educationally irrelevant testing procedures. There is a trend in special education, as well as in general education, toward greater accountability for services delivered. The challenge is to develop and implement service delivery systems that help teachers to teach more effectively and students to learn. The pre-referral intervention model is one proposed delivery system that shows some promise for providing these needed services.

References

- Adelman, H. S., & Taylor, L. Learning disabilities in perspective. Glenview, IL: Scott, Foresman, 1983.
- Affleck, J., Lowenbraun, S., & Archer, A. Teaching the mildly handicapped in the regular classroom. Columbus, OH: Charles E. Merrill, 1980.
- Algozzine, B. Problem behavior management: Educator's resource service. Gaithersburg, MD: Aspen, 1982.
- Algozzine, B., Christenson, S., & Ysseldyke, J. E. Probabilities associated with the referral to placement process. Teacher Education and Special Education, 1982, 5(3), 19-23.
- Algozzine, B., Ysseldyke, J. E., & Christenson, S. An analysis of the incidence of special class placement: The masses are burgeoning. Journal of Special Education, 1983, 17, 141-147.
- Bergan, J. Behavioral consultation. Columbus, OH: Charles E. Merrill, 1977.
- Christenson, S., Ysseldyke, J., & Algozzine, B. Institutional constraints and external pressures influencing referral decisions. Psychology in the Schools, 1982, 19, 341-345.
- Christenson, S., Ysseldyke, J. E., Wang, J. J., & Algozzine, B. Teachers' attributions for problems that result in referral for psychoeducational evaluation. Journal of Educational Research, 1983, 76, 174-180.
- Elliot, S. N., & Pierse, W. C. Direct assessment of reading skills: An approach which links assessment to intervention. School Psychology Review, 1982, 11, 267-280.
- Epps, S., Ysseldyke, J. E., & Algozzine, B. Impact of different definitions of learning disabilities on the number of students identified. Journal of Psychoeducational Assessment, in press.
- Gickling, E. E., & Havertape, J. Curriculum-based assessment (CBA). In J. Tucker (Ed.), Non test-based assessment. Minneapolis: University of Minnesota, National School Psychology Inservice Training Network, 1981.
- Idol-Maestas, L. Special educators' consultation handbook. Gaithersburg, MD: Aspen, 1983.
- Lambert, N. M. Children's problems and classroom interventions from the perspective of classroom teachers. Professional Psychology, 1976, 1, 507-517.

- Maggs, A., & White, R. The educational psychologist: Facing a new era. Psychology in the Schools, 1982, 19, 129-134.
- Meyers, J., Parsons, R. D., & Martin, R. Mental health consultation in the schools. San Francisco: Jossey-Bass, 1979.
- Sarason, S. B., & Doris, J. Educational handicap, public policy, and social history. New York: Macmillan, 1979.
- Shellenberger, S. Presentation and interpretation of psychological data in educational settings. In C. R. Reynolds & T. E. Gutkin (Eds.), The handbook of school psychology. New York: John Wiley, 1982.
- Thurlow, M. L., & Ysseldyke, J. E. Instructional planning: Information collected by school psychologists vs. information considered useful by teachers. Journal of School Psychology, 1982, 20, 3-10.
- Thurlow, M. L., Ysseldyke, J. E., & Casey, A. Criteria for identifying LD students: Definitional problems exemplified (Research Report No. 108). Minneapolis: University of Minnesota, Institute for Research on Learning Disabilities, 1983.
- Tucker, J. (Ed.) Non test-based assessment. Minneapolis: University of Minnesota, National School Psychology Inservice Training Network, 1981. (a)
- Tucker, J. Sequential stages of the appraisal process. Minneapolis: University of Minnesota, National School Psychology Inservice Training Network, 1981. (b)
- Ysseldyke, J. E., Algozzine, B., Richey, L., & Graden, J. Declaring students eligible for learning disability services: Why bother with the data? Learning Disability Quarterly, 1982, 5, 37-44.
- Ysseldyke, J. E., Algozzine, B., Rostollan, D., & Shinn, M. A content analysis of the data presented at special education placement team meetings. Journal of Clinical Psychology, 1981, 37, 655-662.
- Ysseldyke, J. E., Algozzine, B., Shinn, M., & McGue, M. Similarities and differences between underachievers and students classified learning disabled. Journal of Special Education, 1982, 16, 73-85.

Footnote

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Table 1
Referral, Testing, and Placement Rates
Comparing 1981-82 to First Semester of 1982-83

School	Referrals to Facilitator	New Referrals to CST ¹	1981-1982		Percentage of Referral to Placement	1982-1983 (1st sem.)			Perce of P to 1
			New Students Tested	New Students Placed		New Referrals to CT ²	New Students Tested	New Students Placed	
1	NA	20	20	15	75%	12	5	5	
2	46	28	28	11	24%	21	13	4	
3	NA	49	31	16	33%	69	12	5	

CST refers to Child Study Team

CT refers to Consulting Teacher

Table 2
Referral, Testing, and Placement Rates
Comparing 1981-82 to 1982-83

School	Referrals to Facilitator	1981-82				1982-83				Percentage of Referral to Placement
		New Referrals to CST ¹	New Students Tested	New Students Placed	Percentage of Referral to Placement	New Referrals to CT ²	New Referrals to CST	New Students Tested	New Students Placed	
1	NA	20	20	15	75%	30	30	21	15	50%
2	46	28	28	11	24%	54	23	23	14	26%
3	NA	49	31	16	33%	93	21	21	9	10%

¹ CST refers to Child Study Team

² CT refers to Consulting Teacher

Table 3
Pre/Post Survey Item Differences^a

Question #	School 1	School 2	School 3	Total	Significance- between Pre & Post	Significance between Schools	Significant Interaction Pre/Post x School
1	1.75 1.37	1.56 1.71	2.04 1.46	1.76 1.49	.022	NS	.043
2	2.65 1.77	2.35 2.44	2.79 2.00	2.59 2.03	.000	NS	.007
3	2.31 1.63	2.53 2.41	2.63 1.92	2.45 1.94	.002	.033	NS
4	2.35 1.52	2.38 2.50	2.46 1.79	2.38 1.88	.004	NS	.02
5	3.02 2.06	2.68 2.74	3.13 2.88	2.94 2.45	.047	NS	.045
6	2.06 1.67	2.24 2.21	2.46 1.92	2.20 1.89	.033	NS	NS
7	3.19 2.44	3.62 3.27	3.50 2.88	3.39 2.79	.006	.012	NS
8	2.27 1.62	2.68 2.41	2.29 2.21	2.40 1.99	NS	.029	NS
9	6.6% 6.8%	5.2% 5.9%	12.4% 7.5%	7.4% 6.7%	NS	.044	.048
10	1.38 1.34	1.56 1.12	1.54 1.29	1.47 1.16	.017	NS	NS
11	1.54 1.19	1.44 1.65	1.50 1.38	1.50 1.37	NS	NS	NS
12	1.39 1.25	1.50 1.24	1.71 1.33	1.49 1.26	.041	NS	NS
13	1.62 1.44	2.12 1.77	2.50 1.67	1.96 1.59	.003	.038	NS
14	2.04 1.64	1.88 1.88	2.50 1.79	2.09 1.75	.035	NS	NS
15	1.89 1.67	2.71 2.00	2.67 2.13	2.31 1.87	.011	.031	NS
16	1.44 1.40	1.91 1.47	1.63 1.25	1.63 1.39	NS	NS	NS
17	1.54 1.42	1.74 1.91	1.54 1.25	1.60 1.54	NS	NS	NS
18	1.33 1.27	1.59 1.47	1.50 1.04	1.45 1.28	NS	NS	NS
19	1.81 1.75	2.29 2.00	2.25 1.63	2.06 1.80	.034	NS	NS
20	1.60 1.31	1.65 1.85	1.83 1.46	1.66 1.51	NS	NS	NS
21	1.71 1.69	2.85 2.47	2.46 1.83	2.22 1.85	.031	.000	NS

^a For each question, the top number is the pre-survey mean response (1=strongly agree; 5=strongly disagree) and the bottom number is the post-survey mean response.

Table 4
Pre/Post Survey Item Differences Analyzed by Teachers Who Referred
and Teachers Who Did Not Refer^a

Question	Referring Teachers ^b	Non-Referring Teachers ^c	Significance between pre and post	Significance between refer and not refer	Significant interaction
1	1.81 1.77	1.73 1.85	NS	NS	NS
2	2.55 2.39	2.58 2.53	NS	NS	NS
3	2.39 2.19	2.37 2.46	NS	NS	NS
4	2.48 2.48	2.27 2.20	NS	NS	NS
5	2.68 2.94	3.09 3.02	NS	NS	NS
6	2.26 2.29	2.17 2.32	NS	NS	NS
7	3.48 3.43	3.24 3.27	NS	NS	NS
8	2.74 2.55	2.27 2.32	NS	NS	NS
9	8.97 8.74	7.78 7.86	NS	NS	NS
10	1.71 1.55	1.55 1.55	NS	NS	NS
11	1.61 1.65	1.51 1.70	NS	NS	NS
12	1.74 1.58	1.37 1.53	NS	NS	NS
13	2.52 2.10	1.78 1.86	NS	.018	NS
14	2.36 2.52	1.97 1.93	NS	.028	NS
15	3.13 2.84	1.98 2.00	NS	.000	NS
16	1.65 1.52	1.59 1.80	NS	NS	NS
17	1.65 1.77	1.53 1.93	.041	NS	NS
18	1.42 1.36	1.41 1.68	NS	NS	NS
19	2.52 2.19	1.86 2.20	NS	NS	.026
20	1.55 1.84	1.73 1.85	NS	NS	NS
21	2.58 2.58	2.22 2.31	NS	NS	NS

^a For each item the top number is the pre-survey mean response (1=strongly agree; 5=strongly disagree) and the bottom number is the post-survey mean response.

^b n = 31

^c n = 59

Staff

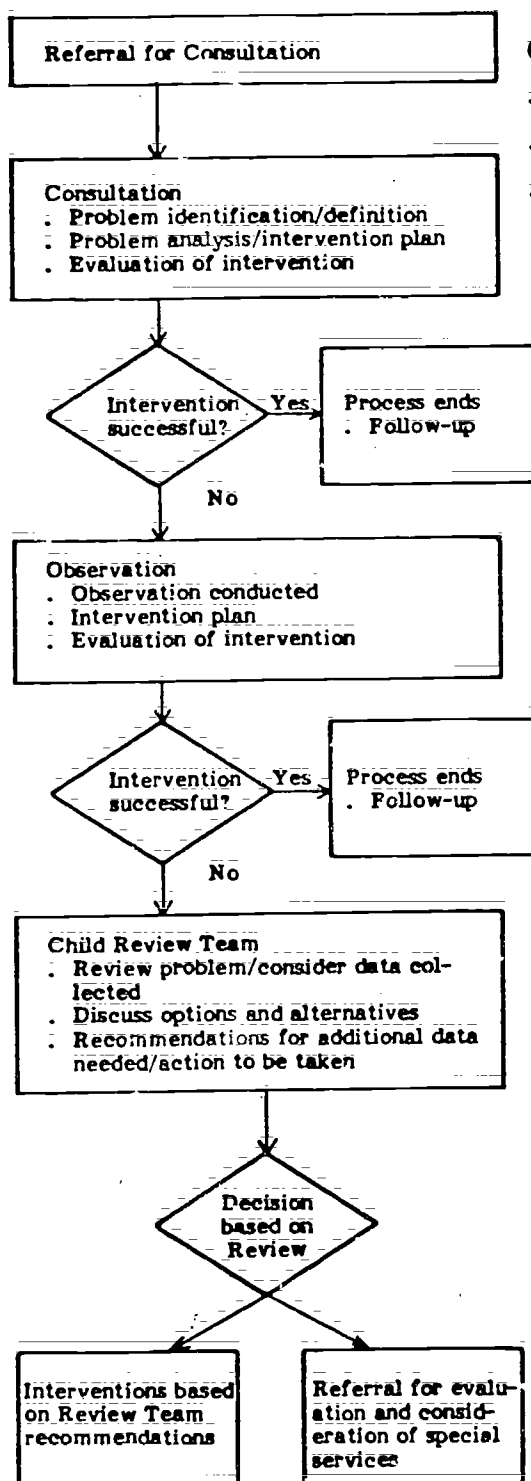
- Classroom teacher
- Consulting teacher
- Additional staff as appropriate to building procedures*

- Classroom teacher
- Consulting teacher
- Additional staff as appropriate to specific area of concern*

- Classroom teacher
- Consulting teacher
- Additional staff as appropriate to specific area of concern*

- Classroom teacher
- Consulting teacher
- Child review team
- Additional staff as appropriate to specific area of concern*

Process



Resources

(all stages)

- District-adopted materials, programs, resources
- Contact with appropriate district personnel
- Additional supplemental resources as appropriate to specific area of concern

APPENDIX A

Forms Used in Pre-referral Intervention

REQUEST FOR CONSULTATION

Student Name _____ Sex _____ Date of Birth _____

Referring Teacher _____ Grade _____ School _____

Describe specific educational/behavioral problems:

Current instructional level:

Reading _____ Math _____

What special services is the student receiving (e.g., speech, Title I, Reading Teacher)

Results of vision, hearing, medical screening:

Most convenient days/times to meet for consultation on referral:

THIS IS NOT A REFERRAL FOR TESTING

CONSULTATION CONTACTS

Student Name _____ Sex _____ Date of Birth _____

Teacher Name _____ Grade _____ School _____

Problem Identification Interview

Date _____

Behavioral description of problem(s):

Conditions under which behavior occurs:

Performance to be measured:

What:

How:

By Whom:

Teacher _____

Consultant _____

Next contact _____

Problem Analysis Interview

Date _____

Discrepancy between actual/desired performance: _____

Performance goals/objectives: _____

Strategies: _____

Teacher _____ Consultant _____

Next contact _____

Implementation Contact

Date _____

_____ Implemented as planned

_____ Modifications to implementation plan (note): _____

Problem Evaluation Interview

Date _____

Evaluation of plan effectiveness:

_____ Follow-up contact to successful intervention Next Contact _____

_____ Proceed to observation. Next Contact _____

Teacher _____ Consultant _____

OBSERVATION CONTACTS

Student Name _____ Sex _____ Date of Birth _____

Teacher Name _____ Grade _____ School _____

Report on Observation

Date _____

Behavior observed:

Conditions of observed behavior:

Causes/consequences of observed behavior:

Teacher _____

Consultant _____

Next Contact _____

Observation Contact

Date _____

Feedback on observation:

Intervention plan based on observation:

Goals/objectives:

Strategies:

Teacher _____ Consultant _____

Next contact _____

Follow-up on Observation Interventions Date _____

Evaluation of plan effectiveness:

_____ Follow-up contact to successful intervention: Next Contact _____

_____ Proceed to interventions: Next Contact _____

Teacher _____ Consultant _____

INTERVENTION CONTACTS

Student _____ Sex _____ Date of Birth _____

Teacher _____ Grade _____ School _____

Intervention Plan Meeting

Date _____

Prioritize intervention objectives:

Data needed to plan interventions:

Intervention goals/objectives:

Behavior to be changed:

Criterion for success:

Duration of intervention:

Context of intervention:

Who to implement:

Strategies:

Methods:

Materials

Teacher _____ Consultant _____

Next contact _____

Intervention Monitoring Meeting

Date _____

_____ Interventions implemented as planned.

_____ Modifications to intervention plan (note):

Teacher _____

Consultant _____

Next contact _____

Intervention Evaluation Meeting

Date _____

Outcomes of interventions:

_____ Follow-up on successful intervention plan. Next Contact _____

_____ Continued intervention. Next Contact _____

_____ Case referred to child study team:

Teacher _____

Consultant _____

Next contact _____

APPENDIX B
Teacher Survey

TEACHER SURVEY

A. General Information

1. Years teaching experience _____ Grade level now teaching _____

B. Please indicate the extent to which you agree or disagree with each of the following statements. Circle only one answer for each item.

	Strongly Agree				Strongly Disagree
1. Learning disabilities (LD) is a viable, useful classification category to provide educational services to students.	1	2	3	4	5
2. Using existing tests, definitions, and identification criteria, we can accurately decide which students are LD and which are not.	1	2	3	4	5
3. LD students share certain characteristics in common that set them apart from normal students.	1	2	3	4	5
4. In most cases, LD students need special teaching in a special class to learn and make progress.	1	2	3	4	5
5. In most cases, LD students could learn in the regular classroom if the regular classroom teacher altered teaching strategies.	1	2	3	4	5
6. In most cases, learning/behavior problems are caused by some problem(s) in the learner (e.g., perceptual or processing difficulties).	1	2	3	4	5
7. In most cases, learning/behavior problems are caused by some problem(s) in the educational environment (e.g., poor early teaching experiences, inappropriate instruction).	1	2	3	4	5
8. In most cases, learning/behavior problems are caused by some problem(s) in the home environment (e.g., family problems, poor early experiences).	1	2	3	4	5
9. In your best estimate, about what percentage of students do you believe are LD _____?					

C. Please answer the following questions about a typical student you might refer from your class. Circle only one answer for each item. Questions in C refer to your expectations based on past experience, while questions in D refer to your preferences about how you would like to see the process. If you have not referred a student previously, please leave Section C blank.

Based on your past experience with referrals, what do you expect to happen when you refer a student?

	Strongly Agree				Strongly Disagree
10. I would <u>expect</u> testing.	1	2	3	4	5
11. I would <u>expect</u> to talk with someone to get specific ideas on how to alter instruction for the student and teach differently.	1	2	3	4	5

Based on your past experience with testing, what do you expect to happen when a student is tested?

	Strongly Agree				Strongly Disagree
12. I would <u>expect</u> testing to tell the student's strengths/weaknesses.	1	2	3	4	5
13. I would <u>expect</u> testing to give a diagnostic label to determine eligibility for special services.	1	2	3	4	5
14. I would <u>expect</u> testing to give a specific, practical teaching suggestion.	1	2	3	4	5
15. I would <u>expect</u> the student to be placed in special services.	1	2	3	4	5

D. Based on what you would prefer, what do you want to happen when you refer a student?

	Strongly Agree				Strongly Disagree
16. I would <u>prefer</u> testing.	1	2	3	4	5
17. I would <u>prefer</u> to talk with someone to get specific ideas on how to alter instruction for the student and teach differently.	1	2	3	4	5

Based on what you would prefer, what do you want to happen when a student is tested?

	Strongly Agree				Strongly Disagree
18. I would <u>prefer</u> testing to tell the student's strengths/weaknesses.	1	2	3	4	5
19. I would <u>prefer</u> testing to give a diagnostic label to determine eligibility for special services.	1	2	3	4	5
20. I would <u>prefer</u> testing to give a specific, practical teaching suggestion.	1	2	3	4	5
21. I would <u>prefer</u> the student to be placed in special services.	1	2	3	4	5

JG/pf/DsF1

PUBLICATIONS

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Wesson, C., Mirkin, P., & Deno, S. Teachers' use of self instructional materials for learning procedures for developing and monitoring progress on IEP goals (Research Report No. 63). January, 1982.

Fuchs, L., Wesson, C., Tindal, G., Mirkin, P., & Deno, S. Instructional changes, student performance, and teacher preferences: The effects of specific measurement and evaluation procedures (Research Report No. 64). January, 1982.

Potter, M., & Mirkin, P. Instructional planning and implementation practices of elementary and secondary resource room teachers: Is there a difference? (Research Report No. 65). January, 1982.

Thurlow, M. L., & Ysseldyke, J. E. Teachers' beliefs about LD students (Research Report No. 66). January, 1982.

Graden, J., Thurlow, M. L., & Ysseldyke, J. E. Academic engaged time and its relationship to learning: A review of the literature (Monograph No. 17). January, 1982.

King, R., Wesson, C., & Deno, S. Direct and frequent measurement of student performance: Does it take too much time? (Research Report No. 67). February, 1982.

Greener, J. W., & Thurlow, M. L. Teacher opinions about professional education training programs (Research Report No. 68). March, 1982.

Algozzine, B., & Ysseldyke, J. Learning disabilities as a subset of school failure: The oversophistication of a concept (Research Report No. 69). March, 1982.

Fuchs, D., Zern, D. S., & Fuchs, L. S. A microanalysis of participant behavior in familiar and unfamiliar test conditions (Research Report No. 70). March, 1982.

- Shinn, M. R., Ysseldyke, J., Deno, S., & Tindal, G. A comparison of psychometric and functional differences between students labeled learning disabled and low achieving (Research Report No. 71). March, 1982.
- Thurlow, M. L., Graden, J., Greener, J. W., & Ysseldyke, J. E. Academic responding time for LD and non-LD students (Research Report No. 72). April, 1982.
- Graden, J., Thurlow, M., & Ysseldyke, J. Instructional ecology and academic responding time for students at three levels of teacher-perceived behavioral competence (Research Report No. 73). April, 1982.
- Algozzine, B., Ysseldyke, J., & Christenson, S. The influence of teachers' tolerances for specific kinds of behaviors on their ratings of a third grade student (Research Report No. 74). April, 1982.
- Wesson, C., Deno, S., & Mirkin, P. Research on developing and monitoring progress on IEP goals: Current findings and implications for practice (Monograph No. 18). April, 1982.
- Mirkin, P., Marston, D., & Deno, S. L. Direct and repeated measurement of academic skills: An alternative to traditional screening, referral, and identification of learning disabled students (Research Report No. 75). May, 1982.
- Algozzine, B., Ysseldyke, J., Christenson, S., & Thurlow, M. Teachers' intervention choices for children exhibiting different behaviors in school (Research Report No. 76). June, 1982.
- Tucker, J., Stevens, L. J., & Ysseldyke, J. E. Learning disabilities: The experts speak out (Research Report No. 77). June, 1982.
- Thurlow, M. L., Ysseldyke, J. E., Graden, J., Greener, J. W., & Mecklenberg, C. Academic responding time for LD students receiving different levels of special education services (Research Report No. 78). June, 1982.
- Graden, J. L., Thurlow, M. L., Ysseldyke, J. E., & Algozzine, B. Instructional ecology and academic responding time for students in different reading groups (Research Report No. 79). July, 1982.
- Mirkin, P. K., & Potter, M. L. A survey of program planning and implementation practices of LD teachers (Research Report No. 80). July, 1982.
- Fuchs, L. S., Fuchs, D., & Warren, L. M. Special education practice in evaluating student progress toward goals (Research Report No. 81). July, 1982.
- Kuehne, K., Deno, S. L., & Mirkin, P. K. Behavioral measurement of social adjustment: What behaviors? What setting? (Research Report No. 82). July, 1982.

- Fuchs, D., Dailey, Ann Madsen, & Fuchs, L. S. Examiner familiarity and the relation between qualitative and quantitative indices of expressive language (Research Report No. 83). July, 1982.
- Videen, J., Deno, S., & Marston, D. Correct word sequences: A valid indicator of proficiency in written expression (Research Report No. 84). July, 1982.
- Potter, M. L. Application of a decision theory model to eligibility and classification decisions in special education (Research Report No. 85). July, 1982.
- Greener, J. E., Thurlow, M. L., Graden, J. L., & Ysseldyke, J. E. The educational environment and students' responding times as a function of students' teacher-perceived academic competence (Research Report No. 86). August, 1982.
- Deno, S., Marston, D., Mirkin, P., Lowry, L., Sindelar, P., & Jenkins, J. The use of standard tasks to measure achievement in reading, spelling, and written expression: A normative and developmental study (Research Report No. 87). August, 1982.
- Skiba, R., Wesson, C., & Deno, S. L. The effects of training teachers in the use of formative evaluation in reading: An experimental-control comparison (Research Report No. 88). September, 1982.
- Marston, D., Tindal, G., & Deno, S. L. Eligibility for learning disability services: A direct and repeated measurement approach (Research Report No. 89). September, 1982.
- Thurlow, M. L., Ysseldyke, J. E., & Graden, J. L. LD students' active academic responding in regular and resource classrooms (Research Report No. 90). September, 1982.
- Ysseldyke, J. E., Christenson, S., Pianta, R., Thurlow, M. L., & Algozzine, B. An analysis of current practice in referring students for psycho-educational evaluation: Implications for change (Research Report No. 91). October, 1982.
- Ysseldyke, J. E., Algozzine, B., & Epps, S. A logical and empirical analysis of current practices in classifying students as handicapped (Research Report No. 92). October, 1982.
- Tindal, G., Marston, D., Deno, S. L., & Germann, G. Curriculum differences in direct repeated measures of reading (Research Report No. 93). October, 1982.
- Fuchs, L.S., Deno, S. L., & Marston, D. Use of aggregation to improve the reliability of simple direct measures of academic performance (Research Report No. 94). October, 1982.
- Ysseldyke, J. E., Thurlow, M. L., Mecklenburg, C., & Graden, J. Observed changes in instruction and student responding as a function of referral and special education placement (Research Report No. 95). October, 1982.

- Fuchs, L. S., Deno, S. L., & Mirkin, P. K. Effects of frequent curriculum-based measurement and evaluation on student achievement and knowledge of performance: An experimental study (Research Report No. 96). November, 1982.
- Fuchs, L. S., Deno, S. L., & Mirkin, P. K. Direct and frequent measurement and evaluation: Effects on instruction and estimates of student progress (Research Report No. 97). November, 1982.
- Tindal, G., Wesson, C., Germann, G., Deno, S. L., & Mirkin, P. K. The Pine County model for special education delivery: A data-based system (Monograph No. 19). November, 1982.
- Epps, S., Ysseldyke, J. E., & Algozzine, B. An analysis of the conceptual framework underlying definitions of learning disabilities (Research Report No. 98). November, 1982.
- Epps, S., Ysseldyke, J. E., & Algozzine, B. Public-policy implications of different definitions of learning disabilities (Research Report No. 99). November, 1982.
- Ysseldyke, J. E., Thurlow, M. L., Graden, J. L., Wesson, C., Deno, S. L., & Algozzine, B. Generalizations from five years of research on assessment and decision making (Research Report No. 100). November, 1982.
- Marston, D., & Deno, S. L. Measuring academic progress of students with learning difficulties: A comparison of the semi-logarithmic chart and equal interval graph paper (Research Report No. 101). November, 1982.
- Beattie, S., Grise, P., & Algozzine, B. Effects of test modifications on minimum competency test performance of third grade learning disabled students (Research Report No. 102). December, 1982.
- Algozzine, B., Ysseldyke, J. E., & Christenson, S. An analysis of the incidence of special class placement: The masses are burgeoning (Research Report No. 103). December, 1982.
- Marston, D., Tindal, G., & Deno, S. L. Predictive efficiency of direct, repeated measurement: An analysis of cost and accuracy in classification (Research Report No. 104). December, 1982.
- Wesson, C., Deno, S., Mirkin, P., Sevcik, B., Skiba, R., King, R., Tindal, G., & Maruyama, G. Teaching structure and student achievement effects of curriculum-based measurement: A causal (structural) analysis (Research Report No. 105). December, 1982.
- Mirkin, P. K., Fuchs, L. S., & Deno, S. L. (Eds.). Considerations for designing a continuous evaluation system: An integrative review (Monograph No. 20). December, 1982.
- Marston, D., & Deno, S. L. Implementation of direct and repeated measurement in the school setting (Research Report No. 106). December, 1982.

- Deno, S. L., King, R., Skiba, R., Sevcik, B., & Wesson, C. The structure of instruction rating scale (SIRS): Development and technical characteristics (Research Report No. 107). January, 1983.
- Thurlow, M. L., Ysseldyke, J. E., & Casey, A. Criteria for identifying LD students: Definitional problems exemplified (Research Report No. 108). January, 1983.
- Tindal, G., Marston, D., & Deno, S. L. The reliability of direct and repeated measurement (Research Report No. 109). February, 1983.
- Fuchs, D., Fuchs, L. S., Dailey, A. M., & Power, M. H. Effects of pre-test contact with experienced and inexperienced examiners on handicapped children's performance (Research Report No. 110). February, 1983.
- King, R. P., Deno, S., Mirkin, P., & Wesson, C. The effects of training teachers in the use of formative evaluation in reading: An experimental-control comparison (Research Report No. 111). February, 1983.
- Tindal, G., Deno, S. L., & Ysseldyke, J. E. Visual analysis of time series data: Factors of influence and level of reliability (Research Report No. 112). March, 1983.
- Tindal, G., Shinn, M., Fuchs, L., Fuchs, D., Deno, S., & Germann, G. The technical adequacy of a basal reading series mastery test (Research Report No. 113). April, 1983.
- Sevcik, B., Skiba, R., Tindal, G., King, R., Wesson, C., Mirkin, P., & Deno, S. Communication of IEP goals and student progress among parents, regular classroom teachers, and administrators using systematic formative evaluation (Research Report No. 114). April, 1983.
- Wesson, C. Two student self-management techniques applied to data-based program modification (Research Report No. 115). April, 1983.
- Wesson, C., Skiba, R., Sevcik, B., King, R., Tindal, G., Mirkin, P., & Deno, S. The impact of the structure of instruction and the use of technically adequate instructional data on reading improvement (Research Report No. 116). May, 1983.
- Wesson, C. Teacher vs student selection of instructional activities (Research Report No. 117). May, 1983.
- Tindal, G., & Deno, S. Factors influencing the agreement between visual and statistical analyses of time series data (Research Report No. 118). June, 1983.
- Skiba, R. S. Classroom behavior management: A review of the literature (Monograph No. 21), June, 1983.
- Graden, J. L., Thurlow, M. L., & Ysseldyke, J. E. When are students most academically engaged? Academic responding time in different instructional ecologies (Research Report No. 119). June, 1983.

- Fuchs, L. S., Deno, S. L., & Roettger, A. The effect of alternative data-utilization rules on spelling achievement: An n of 1 study (Research Report No. 120). June, 1983.
- Skiba, R., Sevcik, B., Wesson, C., King, R., & Deno, S. The non-effect of process-product variables in resource classrooms (Research Report No. 121). June, 1983.
- Fuchs, L., Tindal, G., Shinn, M., Fuchs, D., Deno, S., & Germann, G. Technical adequacy of basal readers' mastery tests: The Ginn 720 series (Research Report No. 122). June, 1983.
- Tindal, G., Germann, G., Marston, D., & Deno, S. The effectiveness of special education: A direct measurement approach (Research Report No. 123). June, 1983.
- Sevcik, B., Skiba, R., Tindal, G., King, R., Wesson, C., Mirkin, P., & Deno, S. Curriculum-based measurement: Effects on instruction, teacher estimates of student progress, and student knowledge of performance (Research Report No. 124). July, 1983.
- Skiba, R., Marston, D., Wesson, C., Sevcik, B., & Deno, S. L. Characteristics of the time-series data collected through curriculum-based reading measurement (Research Report No. 125). July, 1983.
- Ysseldyke, J., Christenson, S., Graden, J., & Hill, D. Practical implications of research on referral and opportunity to learn (Monograph No. 22). July, 1983.
- Marston, D., Deno, S., & Tindal, G. A comparison of standardized achievement tests and direct measurement techniques in measuring pupil progress (Research Report No. 126). July, 1983.
- Fuchs, D., Fuchs, L. S., Tindal, G., & Deno, S. L. Variability of performance: A "signature" characteristic of learning disabled children? (Research Report No. 127). July, 1983.
- Tindal, G., Fuchs, L., Fuchs, D., Shinn, M., Deno, S., & Germann, G. The technical adequacy of a basal series mastery test: The Scott-Foresman reading program (Research Report No. 128). July, 1983.
- Fuchs, L. S., Fuchs, D., & Deno, S. L. The nature of inaccuracy among readability formulas (Research Report No. 129). July, 1983.
- Fuchs, L., Tindal, G., Fuchs, D., Shinn, M., Deno, S., & Germann, G. The technical adequacy of a basal reading mastery test: The Holt basic reading series (Research Report No. 130). July, 1983.
- Ysseldyke, J. E., Christenson, S., Algozzine, B., & Thurlow, M. L. Classroom teachers' attributions for students exhibiting different behaviors (Research Report No. 131). July, 1983.

- Tindal, G., Germann, G., & Deno, S. Descriptive research on the Pine County norms: A compilation of findings (Research Report No. 132). July, 1983.
- Skiba, R. J. The relationship between classroom management strategies and student misbehaviors (Research Report No. 133). July, 1983.
- Fuchs, D., Fuchs, L. S., Power, M. H., & Dailey, A. M. Systematic bias in the assessment of handicapped children (Research Report No. 134). July, 1983.
- Fuchs, D., & Fuchs, L. S. The importance of scorer bias to handicapped preschoolers' stronger performance with familiar examiners (Research Report No. 135). July, 1983.
- Foster, G. G., Ysseldyke, J. E., Casey, A., & Thurlow, M. L. The congruence between reason for referral and placement outcome (Research Report No. 136). August, 1983.
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- Skiba, R., & Deno, S. A correlational analysis of the statistical properties of time-series data and their relationship to student achievement in resource classrooms (Research Report No. 138). September, 1983.
- Potter, M. L. Decision research and its application to educational settings: A literature review (Monograph No. 23). September, 1983.
- Graden, J., Berquist, B., & Burnside, C. W. Helping teachers increase the time their students spend in learning (Research Report No. 139). September, 1983.
- Graden, J., Casey, A., & Bonstrom, O. Prereferral interventions: Effects on referral rates and teacher attitudes (Research Report No. 140). September, 1983.
- Thurlow, M. L., Christenson, S., & Ysseldyke, J. E. Referral research: An integrative summary of findings (Research Report No. 141). September, 1983.
- Ysseldyke, J. E., & Thurlow, M. L. Identification/classification research: An integrative summary of findings (Research Report No. 142). September, 1983.
- Thurlow, M. L., & Ysseldyke, J. E. Instructional intervention research: An integrative summary of findings (Research Report No. 143). September, 1983.
- Ysseldyke, J. E., Thurlow, M. L., & Christenson, S. Evaluation research: An integrative summary of findings (Research Report No. 144). September, 1983.